

ABSTRACT

The present invention relates to a naturally occurring low molecular weight adenosine A3 receptor agonist (LMW-A3Rag) which is preferably obtained from a vertebrate tissue or a vertebrate-derived cell by extraction in a liquid medium. The LMW-A3Rag of the invention is characterized by the following feature: (i) it is obtainable from animal-derived tissue or cells; (ii) it filters through a filter with a maximal molecular weight cut-off of about 3,000 Daltons; (iii) it is water soluble, heat stable, non-proteinaceous and resistant to adenosine deaminase activity.

The invention also concerns pharmaceutical compositions comprising the naturally occurring LMW-A3Rag of the invention and therapeutic methods comprising administering to a subject in need an effective amount of the naturally occurring A3Rag for achieving a therapeutic effect, the therapeutic effect comprises inhibition of adenylate cyclase in target cells.